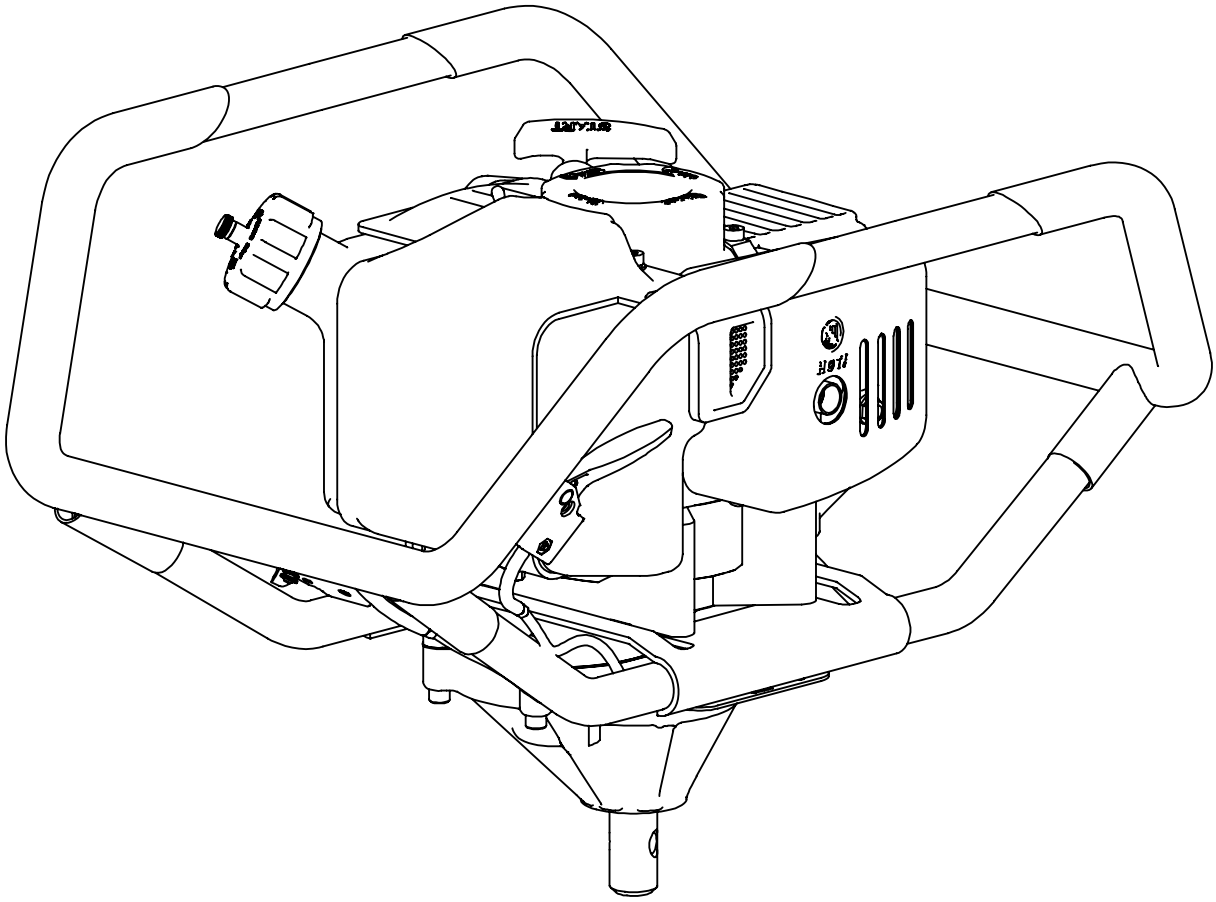
Operator's Manual
Original Operating Instructions

Dually Earth Auger Powerhead



Product # 10310

Get parts online at
www.getearthquake.com

10664
Rev. 01/10/12

INTRODUCTION

Congratulations on your investment in quality. Thank you for purchasing an Earthquake® Dually Powerhead. We have worked to ensure that your powerhead meets the highest standards for usability and durability. With proper care, your powerhead will provide many years of service.

Read this entire manual before installation and use. Earthquake® reserves the right to change, alter or improve the product and this document at any time without prior notice.

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FEDERAL EMISSION INFORMATION

Ardisam warrants to the retail purchaser, that this small, off-road engine was designed, built and equipped to conform at the time of initial sale to all applicable regulations of the U.S. Environmental Protection Agency (EPA) and those of the State of California (CARB).

REGISTRATION AND SERVICE

Record the model number and serial number in the space provided for easy reference when ordering parts or requesting technical support. Excluding emissions-related warranty items, the warranty is valid only if the completed registration is received by Earthquake® within 30 days of purchase. **(SEE WARRANTY SECTION FOR MORE INFORMATION.)** You can register your warranty online by visiting www.getearthquake.com, or by mailing it to: Earthquake®, 1160 Eighth Avenue, Cumberland, WI 54829. If you do not have a computer, call our customer service department to register your product.

OWNERSHIP RECORDS		
Owner's Name:		
Owner's Address:		
City:	State/Province:	Zip Code/Postal Code:
Model Number:	Serial Number:	
Date of Purchase:		
Notes:		

This manual may contain information for several models. Read and keep this manual for future reference. This manual contains important information on SAFETY, ASSEMBLY, OPERATION, AND MAINTENANCE. The owner must be certain that all the product information is included with the unit. This information includes the MANUAL, the REPLACEMENT PARTS and the WARRANTIES. This information must be included to make sure state laws and other laws are followed. This manual should remain with the engine even if it is resold.

WARNINGS AND SAFETY PRECAUTIONS

OPERATOR'S RESPONSIBILITY

Accurate, safe and effective use of this product is the operator's responsibility.

- Read and follow all safety instructions.
- Maintain this machine according to directions and schedule included in this operator's manual.
- Ensure that anyone who uses the machine is familiar with and understands all controls and safety precautions.

SAFETY MESSAGES

Your manual contains special messages to bring attention to potential safety concerns, machine damage as well as helpful operating and servicing information. Read all the information carefully to avoid injury and machine damage.

NOTE: General information is given throughout the manual that may help the operator in the operation or service of the product.

This symbol points out important safety instructions which if not followed could endanger your personal safety.

BEFORE OPERATING ENGINE:

⚠ WARNING

READ AND COMPLY WITH ENTIRE OPERATING AND MAINTENANCE INSTRUCTIONS FOR THIS MACHINE, IN ADDITIONAL TO ALL SAFETY INSTRUCTIONS. FAILURE TO FOLLOW AND/OR COMPLY WITH THESE INSTRUCTIONS COULD RESULT IN LOSS OF MACHINE CONTROL, SERIOUS PERSONAL INJURY OR DEATH TO YOU AND/OR BYSTSTANDERS, AND EQUIPMENT AND PROPERTY DAMAGE. OPERATE THE ENGINE ACCORDING TO THE SAFETY INSTRUCTIONS OUTLINED HERE AND INSERTED THROUGHOUT THE TEXT. ANYONE WHO USES THIS ENGINE MUST READ THE INSTRUCTIONS AND BE FAMILIAR WITH THE CONTROLS.

CE Intended Use / Foreseeable Misuse

This is a motorized earth auger powerhead that drills into soil. It is pedestrian controlled. It has a petrol-fuelled internal combustion engine that powers the auger blades. It shall not be used for any other purpose.

⚠ WARNING

WARNING INDICATES A HAZARD WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY AND/OR PROPERTY DAMAGE.

⚠ CAUTION

CAUTION INDICATES YOU CAN BE HURT OR YOUR EQUIPMENT DAMAGED IF THE SAFETY INSTRUCTIONS THAT FOLLOW THIS SIGNAL WORD ARE NOT OBEYED.

⚠ IMPORTANT

INDICATES HELPFUL INFORMATION FOR PROPER ASSEMBLY, OPERATION, OR MAINTENANCE OF YOUR EQUIPMENT.

⚠ WARNING

CALIFORNIA PROPOSITION 65 WARNING

ENGINE EXHAUST FROM THIS PRODUCT CONTAINS CHEMICALS KNOWN TO THE STATE OF CALIFORNIA TO CAUSE CANCER, BIRTH DEFECTS, OR OTHER REPRODUCTIVE HARM.

⚠ WARNING

CERTAIN COMPONENTS IN THIS MACHINE AND ITS RELATED ACCESSORIES CONTAIN CHEMICALS KNOWN TO THE STATE OF CALIFORNIA CAUSE CANCER, BIRTH DEFECTS, OR OTHER REPRODUCTIVE HARM. WASH HANDS AFTER HANDLING.

GENERAL SAFETY RULES

- Read, understand, and follow all instructions on the machine and in the manual(s). Be thoroughly familiar with the controls and the proper use of the machine before starting.
- Use this equipment for its intended purpose only.
- Familiarize yourself with all of the safety and operating decals on this equipment and on any of its attachments or accessories.
- Do not put hands or feet near or under rotating parts.
- Only allow responsible individuals who are familiar with the instructions to operate the machine. Do not allow children to operate this machine. Do not allow adults to operate the machine without proper instruction.
- Thoroughly inspect the area where the machine is to be used and remove all foreign objects. Your equipment can propel small objects at high speed causing personal injury or property damage. Stay away from breakable objects such as house windows.
- Wear appropriate clothing such as a long-sleeved shirt or jacket. Also wear long trousers or slacks. Do not wear shorts. Never wear sandals, sneakers, or open shoes, and never operate the machine with bare feet.
- Do not wear loose clothing or jewelry. They can get caught in moving parts. Always keep hands, feet, hair and loose clothing away from any moving parts on engine and machine.
- Always wear safety goggles or safety glasses with side shields when operating the machine to protect your eyes from foreign objects which can be thrown from the unit. Always wear a protective hearing device.
- Always wear work gloves and sturdy footwear. Wear footwear that will improve footing on slippery surfaces. Leather work shoes or short boots work well for most people. These will protect the operator's ankles and shins from small sticks, splinters, and other debris.
- It is advisable to wear protective headgear to prevent the possibility of being struck by small flying particles, or being struck by low hanging branches, twigs, or other objects which may be unnoticed by the operator.
- Do not operate the machine without proper guards or other safety devices in place.
- See Earthquake® instructions for proper operation and installation of accessories. Only use accessories approved by Earthquake®.
- Operate only in daylight or good artificial light.
- Do not operate machine when fatigued or under the influence of alcohol, drugs or other medication which can cause drowsiness or affect your ability to operate this machine safely.
- Never operate machine in wet grass. Always be sure of your footing; keep a firm hold on the handle and walk; never run.
- Watch for traffic when operating near, or when crossing roads.
- If the equipment should start to vibrate abnormally, stop the engine (motor), disconnect the spark plug wire and prevent it from touching the spark plug. Check immediately for cause. Vibration is generally a warning of trouble. If the noise or vibrations of the machine increase, stop immediately and perform an inspection.
- Never leave the machine unattended when the engine is running.
- Regularly inspect the machine. Make sure parts are not bent, damaged or loose.
- Temperature of muffler and nearby areas may exceed 150° F (65° C). Allow muffler and engine areas to cool before touching. Never pick up or carry the machine while the engine is running.
- Prolonged exposure to noise and vibration from gasoline engine-powered equipment should be avoided. Take intermittent breaks and/or wear ear protection from engine noise as well as heavy work gloves to reduce vibration in the hands.
- Keep all screws, nuts and bolts tight.
- Do not transport the machine from one place to another with the engine running.
- When moving the packaged machine, always do so with a partner.
- Check local regulations for age restrictions on use of this machine.

PRODUCT-SPECIFIC SAFETY RULES

- Do not drill above underground utilities, including water lines, gas lines, electric cables, or pipes. Do not operate the powerhead and earth auger in soil with large rocks and foreign objects which can damage the equipment.
- After striking a foreign object, stop the engine. Remove the wire from the spark plug. Inspect the powerhead and auger for damage. If damaged, repair before starting and operating the powerhead auger.
- The blades of the auger should not rotate when the engine is idling. If it does rotate when engine is idling, contact Earthquake® for instructions.
- If an object becomes lodged in the auger, turn engine off, remove the wire from the spark plug and secure, allow to cool before attempting to remove the foreign object.
- The earth blade is very sharp. Use extreme caution when drilling a hole or replacing the blade.
- Do not carry the earth auger unit between holes with the engine running.

ENGINE SAFETY PRECAUTIONS

Warning Carbon Monoxide Poisoning

Engines give off carbon monoxide, an odorless, colorless, poison gas. Carbon monoxide may be present even if you do not smell or see any engine exhaust. Breathing carbon monoxide can cause nausea, fainting or death, in addition to drowsiness, dizziness and confusion. If you experience any of these symptoms, seek fresh air and medical attention immediately.

If your machine comes with a separate engine manual, be sure to read and follow all safety and warning precautions outlined there, in addition to any in this manual.

Preventing Carbon Monoxide Poisoning

- Always start and run engine outdoors. Do not start or run engine in an enclosed area, even if doors or windows are open.
- Never try to ventilate engine exhaust indoors. Carbon monoxide can reach dangerous levels very quickly.
- Never run engine outdoors where exhaust fumes may be pulled into a building.
- Never run engine outdoors in a poorly ventilated area where the exhaust fumes may be trapped and not easily taken away. (Examples include: in a large hole or areas where hills surround your working area.)
- Never run engine in an enclosed or partially enclosed area. (Examples include: buildings that are enclosed on one or more sides, under tents, car ports or basements.)
- Always run the engine with the exhaust and muffler pointed in the direction away from the operator.
- Never point the exhaust muffler towards anyone. People should always be many feet away from the operation of the engine and its attachments.
- Do not change the engine governor settings or over-speed the engine.

Gasoline Fires and Handling Fuel Safely

Use extra care in handling gasoline and other fuels. They are flammable and vapors are explosive.

- When storing extra fuel be sure that it is in an appropriate container and away from any fire hazards.
- Prevent fire and explosion caused by static electric discharge. Use only nonmetal, portable fuel containers approved by the Underwriter's Laboratory (U.L.) or the American Society for Testing & Materials (ASTM).
- Always fill fuel tank outside in a well ventilated area. Never fill your fuel tank with fuel indoors. (Examples include: basement, garage, barn, shed, house, porch, etc.) Never fill tank near appliances with pilot lights, heaters, or other ignition sources. If the fuel has to be drained, this should be done outdoors. The drained fuel should be stored in a container specifically designed for fuel storage or it should be disposed of carefully.
- Never remove the fuel cap or add fuel with the engine running. Stop engine and allow to cool before filling.
- Do not smoke while refueling or operating engine.
- Never drain fuel from engine in an enclosed area.
- Always wipe up excess (spilled) fuel from engine before starting. Clean up spilled fuel immediately. If fuel is spilled, do not start the engine but move machine and fuel container from area. Clean up spilled fuel and allow to evaporate and dry after wiping and before starting.
- Allow fuel fumes/vapors to escape from the area before starting engine.
- Test the fuel cap for proper installation before starting and using engine.
- Always run the engine with fuel cap properly installed on the engine.
- Always unscrew gas cap vent screw while engine is running.

⚠ WARNING

ENGINES GIVE OFF CARBON MONOXIDE, AN ODORLESS, COLORLESS, POISON GAS. CARBON MONOXIDE MAY BE PRESENT EVEN IF YOU DO NOT SMELL OR SEE ANY ENGINE EXHAUST. BREATHING CARBON MONOXIDE CAN CAUSE NAUSEA, FAINTING OR DEATH, IN ADDITION TO DROWSINESS, DIZZINESS AND CONFUSION.

IF YOU EXPERIENCE ANY OF THESE SYMPTOMS, SEEK FRESH AIR AND MEDICAL ATTENTION IMMEDIATELY.

⚠ CAUTION

HOT GASES ARE A NORMAL BY-PRODUCT OF A FUNCTIONING CATALYTIC CONVERTER. FOLLOW ALL SAFETY INSTRUCTIONS TO PREVENT BURNS AND FIRES.

DO NOT ALTER/MODIFY ENGINE:

NEVER ALTER OR MODIFY THE ENGINE FROM THE FACTORY. SERIOUS INJURY OR DEATH MAY OCCUR IF ENGINE IS MODIFIED OR ALTERED.

WHEN WORKING ON OR REPLACING PARTS FOR THE ENGINE OR MACHINE, YOU MUST ALWAYS DISCONNECT SPARK PLUG WIRE FROM THE SPARK PLUG AND KEEP IT AWAY FROM THE SPARK PLUG.

- Do not store engine with fuel in fuel tank indoors. Fuel and fuel vapors are highly explosive.
- During storage, screw down gas cap vent screw tightly.
- Never pour fuel from engine fuel tank.
- Never siphon fuel by mouth to drain fuel tank.
- Always have an adult fill the fuel tank and never allow children to fill the engine.
- Never allow an adult or anyone under the influence of drugs or alcohol to fill engine.
- When storing gasoline or equipment with fuel in the tank, store away from furnaces, stoves, water heaters or other appliances that have a pilot light or other ignition source because they can ignite gasoline vapors.

BURNS AND FIRES

The muffler, muffler guard and other parts of the engine become extremely hot during the operation of the engine. These parts remain extremely hot after the engine has stopped.

Prevention of Burns and Fires

- Never remove the muffler guard from the engine.
- Never touch the muffler guard because it is extremely hot and will cause severe burns.
- Never touch parts of the engine that become hot after operation.
- Always keep materials and debris away from muffler guard and other hot parts of the engine to avoid fires.
- This engine is designed to operate using a catalytic converter which contributes to the engine's compliance with the EPA.

CHILDREN AND BYSTANDERS

Tragic accidents can occur if the operator is not alert to the presence of children and/or bystanders. Never assume that others will remain where you last saw them.

- Keep the area of operation clean of all persons, especially small children and pets. Keep children under the watchful care of a responsible adult.
- Be alert and turn machine off if children enter the area.
- Before and while moving backwards, look behind and down for small children.
- Never allow children to operate the machine

SERVICE

- Always stop the engine whenever you leave the machine, before cleaning, repairing or inspecting the unit. Engine should be turned off and cool, spark plug wire must be removed from spark plug before any repairs or adjustments are attempted. Never make adjustments or repairs with the engine (motor) running. Disconnect the spark plug wire, and keep the wire away from the plug to prevent accidental starting. Remove the ignition key if equipped with an electric start.
- Always wear eye protection when you make adjustments or repairs.
- Keep all nuts and bolts tight and keep equipment in good condition.
- Never tamper with safety devices. Check their proper operation regularly.
- When servicing or repairing the machine, do not tip the machine over or up unless specifically instructed to do so in this manual. Service and repair procedures can be done with the machine in an upright position. Some procedures will be easier if the machine is lifted on a raised platform or working surface.
- To reduce fire hazard, keep machine free of grass, leaves, or other debris build-up. Clean up oil or fuel spillage. Allow machine to cool before storing.
- Stop and inspect the equipment if you strike an object. Repair, if necessary, before restarting.
- Clean and replace safety and instruction decals as necessary.
- To guard against engine over-heating, always have engine debris filter mounted and clean.
- Inspect machine before storage. When not in use, disconnect spark plug lead and store indoors in a dry place locked or otherwise inaccessible to children.
- Use only original equipment parts from Earthquake®, including all nuts and bolts.

SAFETY SYMBOLS AND DECALS

This powerhead has been designed and manufactured to provide you with the safety and reliability you would expect from an industry leader in outdoor power equipment manufacturing.

Reading this manual and the safety instructions it contains will provide you with the necessary basic knowledge to operate this equipment safely and effectively. We have placed a safety decal on the powerhead to remind you of some of this important information while you are operating the unit. These important safety decals are illustrated below, and are shown here to help familiarize you with the location and content of the safety messages you will see as you perform normal drilling operations. Review these decals now, and if you have any questions regarding its meaning or how to comply with these instructions, reread the complete safety instruction text in this manual, or contact your local dealer.

Should a decal become unreadable because of being worn, faded, or otherwise damaged during the use of your powerhead, use the part number information provided to order a replacement label from your local authorized dealer. These decals are easily applied, and will act as a constant visual reminder to you, and others who may use the equipment, to follow the safety instructions necessary for safe, effective operation of your powerhead.

The following symbols and decals may be used on your engine to alert you to potential hazards or to give you guidance in operating your powerhead. Look over them and understand their meanings before operating your powerhead.

Safety or Hazard Symbols

Fire hazards

Wear hearing and eye protection

Shock hazard

Hot surfaces

Toxic fumes

Moving parts

Read manual before operation

Hot! Do not touch!

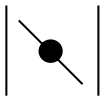
Operational Control Symbols

Slow

Fast

Fuel

Oil


Choke

On/Off

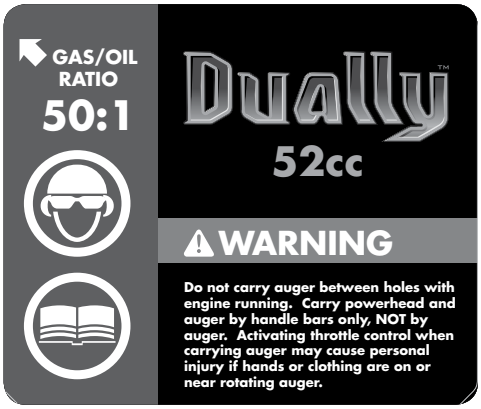
Fuel Shutoff

ARDISAM, INC. CE
1160 8th Avenue | Cumberland, WI 54829 | USA

Serial No.

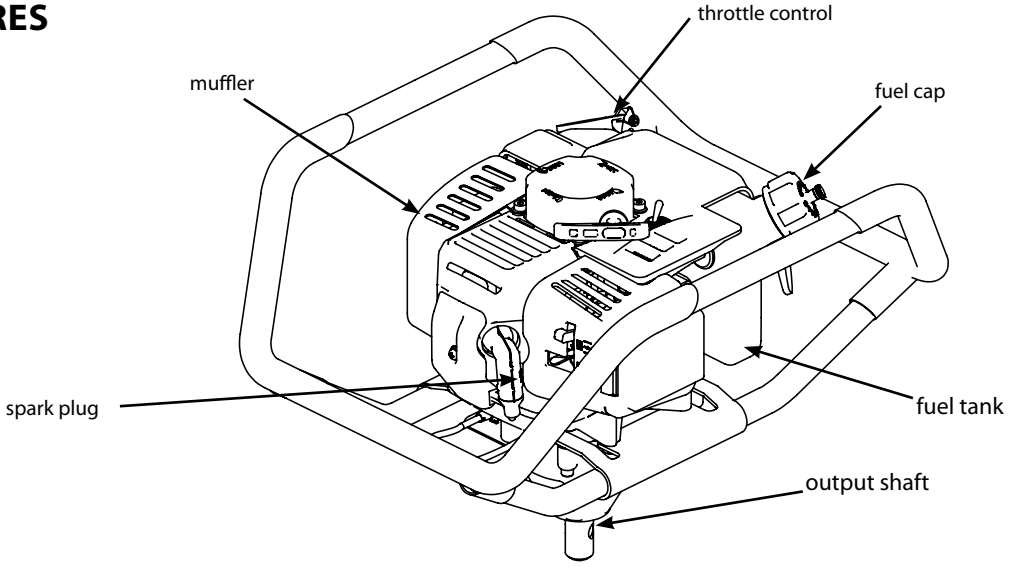
Model: **Dually™** Type: **Earth Auger**
Year: **2012** Mass: **10.89 kg**
Max. Operating Speed: **283 rpm**
L_{PA} (dBA): **100** L_{WA} (dBA): **108.4**

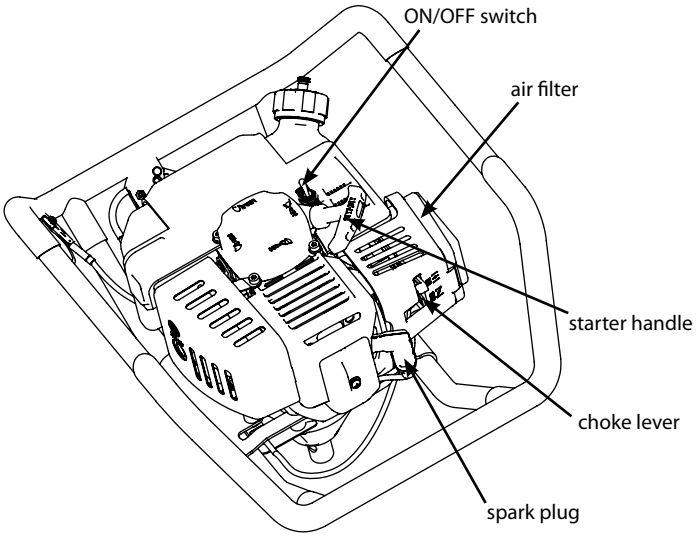
Part No. 10383
SERIAL NUMBER
DECAL

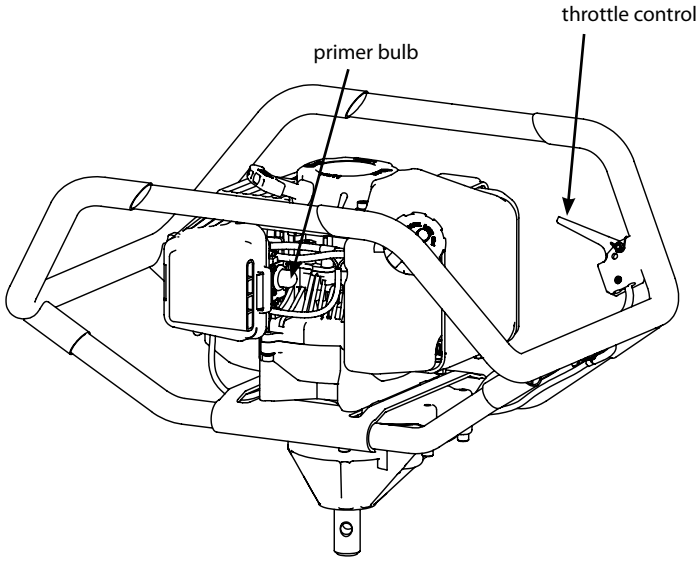


Part No. 10380
DUALLY SHROUD
DECAL

FEATURES







SPECIFICATIONS

Displacement/Stroke	52 cc; 2-stroke
Ignition Type	Electronic ignition
Cooling System	Forced air cooling
Output Shaft Torque	62 ft. lbs.
Spark Plug Type	SEE PARTS BREAKDOWN
Recommended Fuel Type	Unleaded gasoline with limited ethanol content. Add fuel stabilizer.
Fuel Tank Capacity	0.3 gallon (1.14 liters)
Start Type	Recoil
Output Shaft Speed	285 RPM
Net Weight	24 lb (9.53 kg)
Overall Dimensions	20.20" x 16.20" x 14.21" (513mm x 411mm x 361mm)

SOUND AND VIBRATION LEVELS

Model	2006/42/EC Operator Ear L_{PA} (dBA)	2006/42/EC Sound Power Level L_{WA} (dBA)
Dually	100	108.4

Model	2006/42/EC Hand/Arm Vibration Max m/s²	2006/42/EC Vibration Time Limit
Dually	19.7	EAV: 8 minute ELV: 31 minutes

Sound levels tested in accordance with ISO3744 & ISO 11201 - Grade 2 (Engineering) Method. Readings taken with engine at full throttle.

EAV = Exposure Action Value, ELV = Exposure Limit Value

⚠ WARNING

DO NOT REFUEL WHILE SMOKING, NEAR OPEN FLAME, OR OTHER POTENTIAL HAZARDS.

FUEL IS HIGHLY FLAMMABLE AND MUST BE HANDLED WITH CARE. NEVER FILL THE TANK WHEN THE ENGINE IS HOT OR RUNNING. ALWAYS MOVE OUTDOORS TO FILL THE TANK.

ASSEMBLY

UNPACKING

Carefully lift the powerhead out of the box, remove any packing material and cut any ties.

TOOLS REQUIRED

Two (2) 9/16" Wrenches

ASSEMBLY INSTRUCTIONS

1. Insert the output shaft of the transmission (A) in the open end of the Flex Coil ShockTop (B).
2. Line up the bolt holes through the Flex Coil ShockTop and the output shaft of the transmission.
3. Place the included 3/8-16 x 1.5 inch bolt (C) through the bolt hole.
4. Hand-thread the 3/8-16 "Bi-way" lock nut (D) on the bolt.
5. Using two 9/16 inch wrenches, securely tighten the nut and bolt.

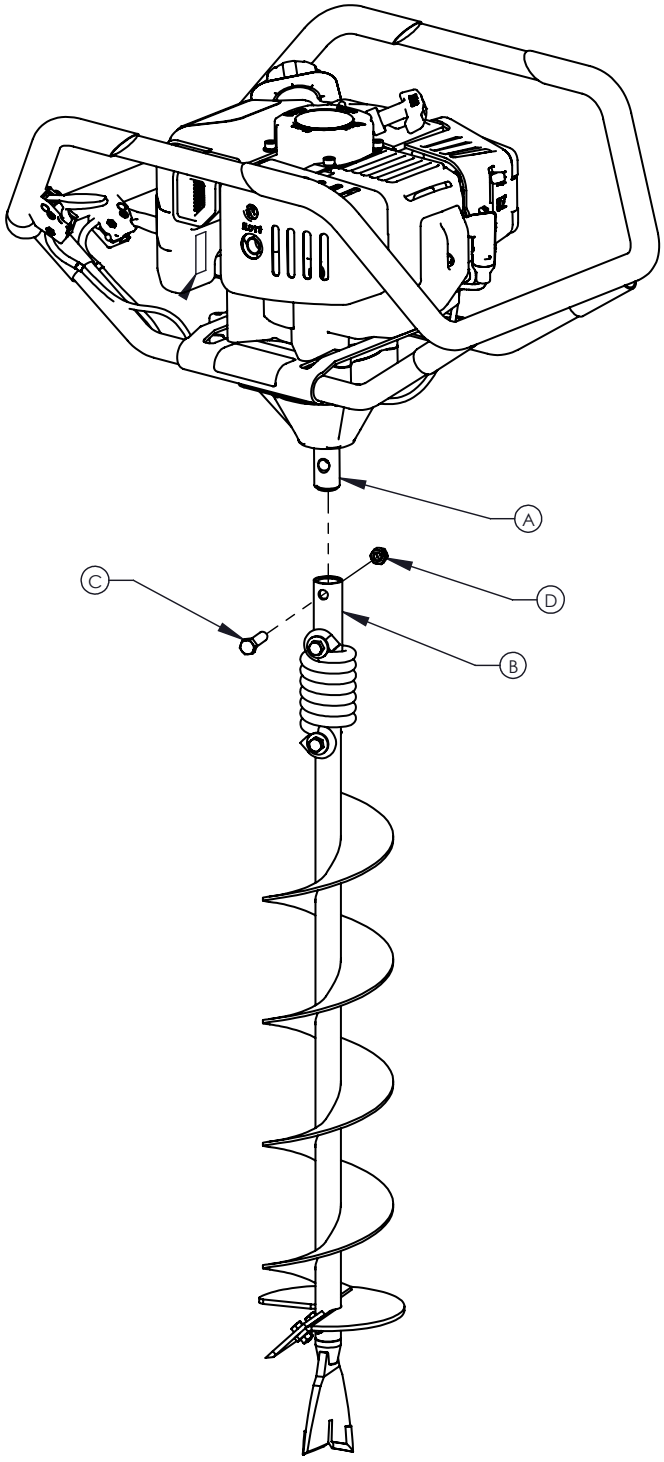


Figure 1

OPERATION

GAS AND OIL QUALITY

To operate the engine, we recommend using Viper® brand 2-cycle oil (P/N 300400) to ensure that the engine operates correctly throughout the life of the engine. Viper® brand two-cycle oil has fuel stabilizer additive which helps to prevent gasoline from oxidizing and gumming up the carburetor when the unit is not in use for long periods of time. Use unleaded regular gas only. It is best to use premium gasoline that has no ethanol content.

NOTE: Viper® oil can be purchased from our web site at www.getearthquake.com.

MIXTURE

Run earth auger with a 50:1 ratio.

GAS	OIL	RATIO
1 gallon	2.5 ounces	50:1
2 gallons	5 ounces	50:1
5 gallons	13 ounces	50:1

MIXING FUEL AND FILLING GAS TANK

MIXING FUEL

1. Fuel must be mixed in a container outside in a well ventilated area.
2. Fill certified fuel container 1/4 full of recommended fuel.
3. Add recommended amount of 2 cycle oil.
4. Screw container cap on straight and tight.
5. Shake the container to mix fuel and oil.
6. Unscrew gas cap slowly to vent, add the remainder of fuel requirements.
7. Wipe away any spilled fuel or oil and allow to evaporate before moving or transporting.

FILLING FUEL TANK

1. Shut-off engine and allow engine to completely cool before refilling the fuel tank.
2. Move to a well-ventilated area, outdoors, away from flames and sparks.
3. Clean debris from area around the fuel cap.
4. Loosen fuel cap slowly. Place the cap on a clean, dry surface.
5. Carefully add fuel without spilling.
6. Do not fill fuel tank completely full; allow space for fuel to expand.
7. Immediately replace fuel cap and tighten. Wipe off spilled fuel and allow to dry before starting engine.

⚠ CAUTION

<u>DO NOT ALTER/MODIFY ENGINE OR AUGER:</u>
NEVER ALTER OR MODIFY THE ENGINE FROM THE FACTORY. SERIOUS INJURY OR DEATH MAY OCCUR IF ENGINE IS MODIFIED OR ALTERED.

WHEN WORKING ON OR REPLACING PARTS FOR THE ENGINE OR AUGER YOU MUST ALWAYS DISCONNECT SPARK PLUG WIRE FROM THE SPARK PLUG AND KEEP IT AWAY FROM THE SPARK PLUG.

ALWAYS WEAR HEARING PROTECTION WHILE OPERATING ENGINE.

DO NOT START YOUR EARTH AUGER UNTIL YOU HAVE READ THE PREVIOUS SECTION OF THIS MANUAL. IF YOU HAVE READ THESE, FOLLOW THE STEPS BELOW TO START YOUR EARTH AUGER.

NEVER STORE ENGINE WITH GAS IN THE TANK INDOORS. FUEL AND FUEL VAPORS ARE HIGHLY FLAMMABLE.

NEVER MIX FUEL AND OIL DIRECTLY IN ENGINE GAS TANK. USE ONLY NON-METAL, PORTABLE FUEL CONTAINERS APPROVED BY THE UNDERWRITER'S LABORATORY (U.L.) OR THE AMERICAN SOCIETY FOR TESTING & MATERIALS (ASTM).

HANDLING AND FILLING THE ENGINE WITH FUEL MUST ALWAYS BE DONE BY AN ADULT.

ALWAYS HANDLE FUEL IN A WELL VENTILATED AREA, OUTDOORS, AWAY FROM FLAMES OR SPARKS.

⚠ IMPORTANT

THIS ENGINE USES A GAS/OIL MIXTURE. DO NOT RUN ON STRAIGHT GAS ONLY. THIS WILL VOID THE WARRANTY AND ENGINE DAMAGE WILL RESULT.

STARTING AND STOPPING ENGINE

- Move engine to a well ventilated area, outdoors, to prevent carbon monoxide poisoning.
- Move to an area away from flames or sparks, to avoid ignition of vapors if present.
- Remove all debris from air cleaner holes and gas cap to ensure proper air flow.

COLD ENGINE START

Starting engine for first time or after engine has cooled off or after running out of fuel.

1. Unscrew the screw from the cap vent on the gas tank (in a counter-clockwise direction).
2. Move choke lever to **RUN** position.

   NOTE: Choke must be in the RUN position when pushing or using the primer bulb.
3. Prime unit until primer hose is filled with gas.

   NOTE: When using the primer bulb, allow the bulb to return completely to its original position between pushes.
4. Move choke lever to **CHOKE** position.

   NOTE: CHOKE position is defined by moving the choke lever as far to the CHOKE position as possible.
5. Push on/off switch to the **ON** position.
6. Squeeze throttle control with right hand. Grasp starter handle with left hand and pull out slowly, until it pulls slightly harder. Without letting starter handle retract, pull rope with a rapid full arm stroke. Let it return to its original position very slowly until unit fires or runs. Repeat this step every time the starter rope is pulled.

   NOTE: If engine fails to start after 5-6 pulls, push primer 1 time and pull starter rope again.
7. After engine starts running, move choke lever to **HALF CHOKE** position until unit runs smoothly.

   NOTE: HALF CHOKE is defined when the choke lever is between CHOKE and RUN.
8. Move choke lever to **RUN** position and move throttle to desired speed.

   NOTE: Run at full throttle when possible. Do not let unit idle for extended periods of time.
9. To stop engine, push on/off switch to **OFF** position.

WARM ENGINE START

1. Move choke lever to **CHOKE** position.

   NOTE: CHOKE position is defined by moving the choke lever as far to the CHOKE position as possible.
2. Continue with Step 4 of Cold Engine Starting.

⚠ WARNING

MAKE SURE THE UNIT IS IN A STABLE POSITION BEFORE PULLING THE STARTER HANDLE.

WHEN THE UNIT STARTS TO FIRE OR RUN, RELEASE THE THROTTLE CONTROL MOMENTARILY WITH YOUR RIGHT HAND AND RETURN YOUR LEFT HAND TO THE HANDLEBAR POSITION TO MAINTAIN CONTROL AND STABILITY OF THE UNIT WITH BOTH HANDS.

⚠ CAUTION

ALWAYS HANDLE FUEL IN A WELL VENTILATED AREA, OUTDOORS, AWAY FROM FLAMES OR SPARKS.

ALWAYS WEAR A PROTECTIVE HEARING DEVICE.

DO NOT START ENGINE IF FUEL IS SPILLED. WIPE OFF EXCESS FUEL AND ALLOW TO DRY. REMOVE ENGINE FROM AREA TO AVOID SPARKS.

IF AUGER IS MOUNTED TO ENGINE, ALL SAFETY GUARDS MUST BE SECURELY ON TO AVOID SERIOUS INJURY.

STARTER ROPE CAN CAUSE AN UNANTICIPATED JERK TOWARDS ENGINE. FOLLOW INSTRUCTIONS TO AVOID INJURY.

IF ENGINE FAILS TO START AFTER TRYING STARTING PROCEDURES, CONTACT OUR CUSTOMER SERVICE DEPARTMENT AT 800-345-6007.

NEVER LEAVE ENGINE RUNNING WHILE UNATTENDED. TURN OFF AFTER EVERY USE.

NEVER CARRY POWERHEAD AND AUGER BETWEEN HOLES WHILE ENGINE IS RUNNING.

HOT ENGINE START:

1. Continue with Step 4 of Cold Engine Starting.
2. If engine does not fire, refer to Step 1 of Warm Engine Starting.

DO NOT attempt to start engine in the following ways:

- **DO NOT use starting fluid.**
- **DO NOT spray flammable liquids or vapors into air cleaner, carburetor or spark plug chamber.**
- **DO NOT remove spark plug and pull on starter rope. Flammable fuel can spray out & ignite from a spark from spark plug.**

TO STOP ENGINE:

Flip the on/off switch to the **OFF** position.

MAINTENANCE AND STORAGE

STEPS FOR WORKING ON EQUIPMENT

1. Turn off engine switch.
2. Disconnect the spark plug wire from the spark plug.
3. Securely place the disconnected spark plug wire away from the spark plug and any metal parts. This must always be done or arcing may occur between spark plug wire and metal parts.
4. Replace or repair the part on the powerhead.
5. Check all parts that were repaired, or removed during repair, that they are secure and fit correctly.

   NOTE: All repair parts must come from the factory. Never replace parts that are not specifically designed for the powerhead.
6. Reconnect the spark plug wire.

POWER AUGER MAINTENANCE

1. The gear case has 4 oz. of grease installed at the factory. It is recommended that once a year the gear case be split and the grease level checked. Add grease only if level of grease is below top of the gears. **DO NOT OVERFILL.** Replacement grease is available online per parts breakdown.
2. Keep all screws, nuts, and bolts tight.
3. For cold weather operation, store the unit in a cool environment. Transferring the unit from a warm to a cold place can cause the build up of harmful condensation.
4. If blade performance decreases, turn unit off and disconnect spark plug wire. Carefully inspect cutting edge of blade for any signs of wear. If blades show any of these signs, they need to be replaced.

ENGINE MAINTENANCE

Read the maintenance schedule and observe these recommendations to extend the life of your engine.

Good maintenance is essential for safe, economical, and trouble-free operation. It will also help reduce air pollution. To help you properly care for your engine, the following pages include a maintenance schedule, routine inspection procedures, and simple maintenance procedures using basic hand tools. Other service tasks that are more difficult, or require special tools, are best handled by professionals and are normally performed by a technician or other qualified mechanic.

Maintenance, replacement or repair of the emissions control devices and systems may be performed by any nonroad engine repair establishment or individuals. However, items must be serviced by an authorized dealer to obtain "no charge" emissions control service.

⚠ CAUTION

<u>TO PREVENT ACCIDENTAL STARTING:</u>
ENGINE MUST BE TURNED OFF AND COOL, AND SPARK PLUG WIRE MUST BE REMOVED FROM SPARK PLUG BEFORE CHECKING AND ADJUSTING ENGINE OR EQUIPMENT.

TEMPERATURE OF MUFFLER AND NEARBY AREAS MAY EXCEED 150º F. (65º C). AVOID THESE AREAS.

CHECK AUGER OFTEN FOR LOOSE NUTS AND BOLTS. KEEP THESE ITEMS TIGHTENED.

NEVER STORE ENGINE WITH FUEL IN THE TANK INSIDE A BUILDING. POTENTIAL SPARKS MAY BE PRESENT FOR IGNITION OF FUEL AND FUEL VAPORS.

ANY MAINTENANCE AND REPAIR ON THE ENGINE AND AUGER MUST ALWAYS BE DONE BY AN ADULT.

ENGINE MUST BE SHUT-OFF, COOL, AND SPARK PLUG WIRE REMOVED BEFORE ANY REPAIR OR MAINTENANCE CAN BE DONE.

⚠ IMPORTANT

NEVER TWIST AIR FILTERS WHEN CLEANING. ALWAYS PRESS.

The maintenance schedule applies to normal operating conditions. If you operate your engine under unusual conditions, such as sustained high-load or high-temperature operation, or use in unusually wet or dusty conditions, consult your servicing dealer for recommendations applicable to your individual needs and use.

MAINTENANCE SCHEDULE

MAINTENANCE ITEM		Every 8 hours (daily)	Every 20 hours or seasonally	Yearly
Clean Engine and Check Bolts & Nut		X		
Air Filter	Check	X		
(See Air Filter section)	Clean *		X	
	Replace			X
Spark Plug (Gap .028")	Check/ Adjust		X	
(See Spark Plug section)	Replace			X

* Service more frequently under dusty conditions

COOLING FINS

Cooling fins, air inlets and linkages must be free from any debris before each use.

AIR FILTER

Never run engine without air cleaner properly installed. Added wear and engine failure may occur if air cleaner is not installed on engine.

Service air cleaner every 3 months or after 20 hours of operation. **Clean filter daily in extremely dusty conditions.**

STEPS FOR CLEANING BLOCK STYLE FOAM AIR FILTER

1. Before removing the air filter cover, move the choke lever to the choke position. **SEE FIGURE 2.**
2. To remove air filter cover, squeeze the latch tabs on both sides of the cover. **SEE FIGURE 3.**
3. Once the latch tabs are released, remove the air filter cover by rotating the cover away from the engine. **SEE FIGURE 4.**
4. Remove the foam filter element **(SEE FIGURE 5)** and replace with a new oiled filter, or clean the original foam filter with warm water and mild soap by following the previous steps for Cleaning Air Filter. Remember to thoroughly oil the foam filter with 30 or 40 weight motor oil and squeeze out any excess oil.
5. Reinstall the foam filter, pressing it in place to ensure that the foam is fully seated into its sealed position. **SEE FIGURE 6.**
6. Replace the air filter cover so that it fully snaps into place and is secured by the latch tabs. Check that the cover is securely attached by pulling slightly on the cover. If the cover doesn't move when pulled, it is secure.

Figure 2

Figure 3

Figure 4

Figure 5

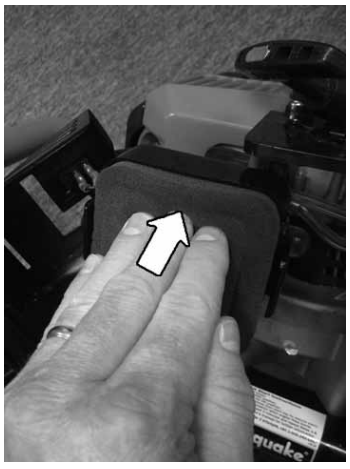


Figure 6

SPARK PLUG

See parts breakdown for recommended spark plug.

1. Check spark plug at the beginning of each season.
2. Disconnect the spark plug cap, and clean any debris from around the spark plug area.
3. Remove spark plug and replace if any of the following occur; pitted electrodes, burned electrodes, cracked porcelain, or deposits around electrodes.
4. After analysis, seat spark plug and tighten with spark plug wrench.

- Reinstall original spark plug, tighten additional 1/2 turn.
- Installing new spark plug, adjust spark plug gap to .028" and tighten additional 1/8 – 1/4 turn .

NOTE: Loose spark plug may overheat and damage engine. Over tightened spark plug may damage threads in the cylinder head.

CARBURETOR

Never tamper with factory setting of the carburetor.

TRANSPORTING YOUR EARTH AUGER

1. Never transport engine inside an enclosed space or vehicle. Fuel or fuel vapors may ignite causing serious injury or death.
2. If fuel is present in the fuel tank, transport in an open vehicle in an upright position.
3. If an enclosed vehicle must be used, remove gas into an approved red fuel container. **DO NOT siphon by mouth.**
4. Run engine to use up the fuel in the carburetor and fuel tank. Always run engine in a well ventilated area.
5. Wipe away any spilled fuel from engine and earth auger. Allow to dry.

LONG-TERM STORAGE
(30 DAYS OR MORE WITHOUT USE)

If your earth auger will not be used for more than one month, prepare it for long term storage.

STEPS FOR LONG-TERM STORAGE

1. Add fuel stabilizer according to manufacturer's instructions.
2. Run engine for 10-15 minutes to ensure that the stabilizer reaches the carburetor.
3. Remove the remainder of the fuel from the gas tank into an approved fuel container.
4. Remove auger from powerhead and apply a thin layer of grease to the output shaft of the transmission.
5. Store auger and powerhead (engine) in a vertical position.
6. Remove all debris from auger and powerhead (engine).

⚠ CAUTION

TO AVOID INJURY OR DEATH, NEVER SIPHON FUEL BY MOUTH.

NEVER STORE EARTH AUGER WITH FUEL IN THE GAS TANK INSIDE AN ENCLOSED AREA OR BUILDING.

TO PREVENT ACCIDENTAL STARTING:
ENGINE MUST BE TURNED OFF AND COOL, AND SPARK PLUG WIRE MUST BE REMOVED FROM SPARK PLUG BEFORE CHECKING AND ADJUSTING ENGINE OR EQUIPMENT.

MAINTENANCE AND REPAIR ON THE ENGINE AND AUGER MUST ALWAYS BE DONE BY AN ADULT.

ENGINE MUST BE SHUT-OFF, COOL, AND SPARK PLUG WIRE REMOVED BEFORE ANY REPAIR OR MAINTENANCE CAN BE DONE.

TROUBLESHOOTING AND REPAIR

At Earthquake®, we build quality and durability into the design of our products; but no amount of careful design by us, and careful maintenance by you, can guarantee a repair-free life for your Earthquake® powerhead. Most repairs will be minor, and easily fixed by following the suggestions in the troubleshooting guide in this manual.

The troubleshooting guide will help you pinpoint the causes of common problems and identify remedies.

For more complicated repairs, you may want to rely on an authorized service center or Earthquake®. A parts breakdown is located toward the end of this manual.

We will always be glad to answer any questions you have, or help you find suitable assistance. To order parts or inquire about warranty, call or e-mail us using the contact information found under "Ordering Replacement Parts".

ORDERING REPLACEMENT PARTS

Parts can be obtained directly from the factory. To order parts visit www.getearthquake.com or call 1-800-345-6007.

For other general questions, you can e-mail us at info@ardisam.com.

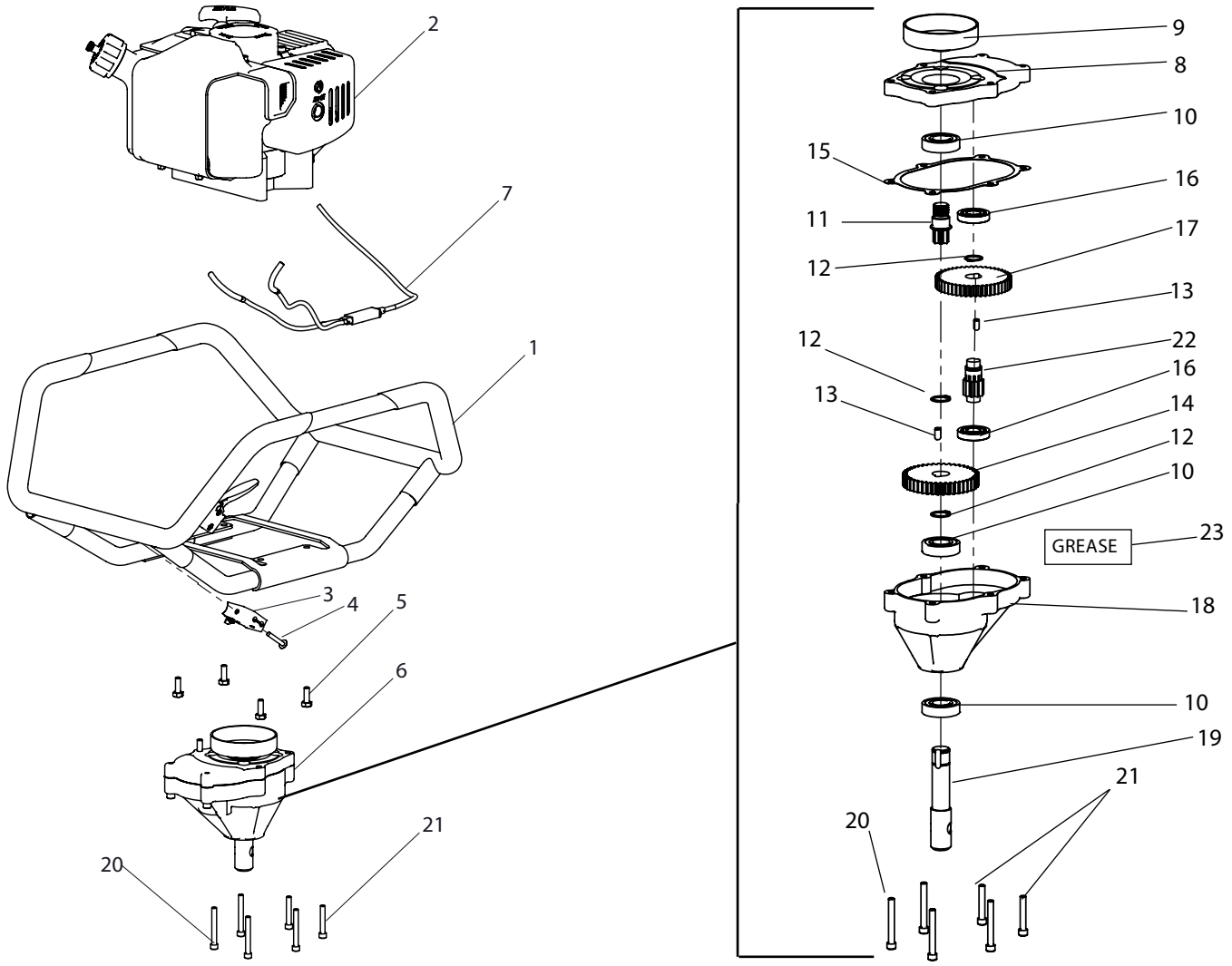
IN CASE OF A SERVICE PROBLEM, DO NOT SEND PRODUCT BACK TO RETAILER. CONTACT EARTHQUAKE® AT 800-345-6007.

Include the following information with your order:
1) Part numbers
2) Part description
3) Quantity
4) Model number and serial number

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	REMEDY/ACTION
Engine will not start	1. Power switch off	1. Flip switch to **ON** position
	2. Spark plug wire disconnected	2. Connect spark plug wire to spark plug
	3. Out of fuel	3. Refuel
	4. Spark plug wet, faulty or improperly gapped	4. Clean, replace or gap spark plug
	5. Throttle control not held open	5. Squeeze throttle control when pulling recoil handle
	6. Fuel line hose not positioned in bottom of gas tank	6. Push fuel line down into fuel in gas tank
	7. Stale fuel	7. Drain old fuel and replace with fresh. Use fuel stabilizer for future preventative measures.
Engine runs rough, floods during operation	1. Dirty air filter	1. Clean or replace air filter
	2. Choke partially engaged	2. Turn off choke
	3. Carburetor out of adjustment	3. Call factory or take to authorized repair center
Engine is hard to start	1. Stale fuel	1. Drain old fuel and replace with fresh. Use gas stabilizer for future preventative measures.
	2. Spark plug wire loose	2. Make sure spark wire is securely attached to spark plug
	3. Dirty carburetor	3. Clean carburetor, use gas stabilizer, new gas can, or purchase carburetor replacement or repair kit per parts breakdown
	4. Throttle control not held open	4. Prime unit 3 more times, squeeze throttle when pulling recoil handle
Engine misses or lacks power	1. Clogged gas tank	1. Remove and clean
	2. Clogged air filter	2. Clean or replace
	3. Carburetor out of adjustment or bad	3. Call factory or take to authorized repair center
	4. Spark plug wet, faulty or improperly gapped	4. Clean, replace or gap spark plug
Engine runs, then quits	1. Gas cap not venting	1. Open manual venting gas cap screw all the way open (counterclockwise)
	2. Plugged fuel filter	2. Clean or replace
	3. Carburetor out of adjustment or bad	3. Call factory or take to authorized repair center
Engine revs too high	1. Carburetor out of adjustment	1. Call factory or take to authorized repair center
Auger turns at idle	1. Idle speed too high	1. Adjust idle speed lower
	2. Broken clutch spring	2. Replace spring
Auger turns, but has no power	1. Choke on	1. Turn off choke after engine is running
	2. Carburetor out of adjustment	2. Call factory or take to authorized repair center
	3. Broken transmission	3. Call factory or take to authorized repair center
	4. Worn clutch shoes	4. Replace clutch shoes and spring
Auger jumps	1. Blade damaged	1. Replace with new blade
Auger cuts slowly	1. Dull blade	1. Replace with new blade
	2. Damaged fishtail point	2. Replace fishtail point

Contact service provider if above remedies fail.



KEY #	PART NO.	DESCRIPTION	QTY.
1	4844	HANDLEBAR FOAMED DUAL STYLE	1
2	10626	ENGINE 51CC VPR CAT HNDLBR MNT	1
3	4822	ASSEMBLY TRIGGER LONG THROW	2
4	4827	BOLT 10-24 X 1/2 PPHMS GR5 ZN	2
5	90148	BOLT 10-24 X 3/4 HH GR5 BLK ZN	4
6	3004119	TRANSMISSION ASSEMBLY	1
7	10473	CABLE ASSEMBLY TWO INTO ONE	1
8	75300*	KIT TOP CASTING	1
9	3004100	CLUTCH DRUM	1
10	8922	BALL BEARING R12 DOUBLE LIP	3
11	9814	GEAR 7T PINION THREADED, 5/8" THREAD	1
12	8924	SNAP RING	3
13	8915	DOWEL PIN STEEL 1/4" X 1/2"	2

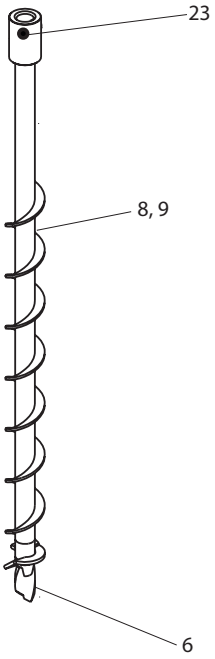
KEY #	PART NO.	DESCRIPTION	QTY.
14	8912	GEAR 44T 3/4" HOLE	1
15	8919	GASKET	1
16	8923	BALL BEARING R10	2
17	8914	GEAR 48T HARD	1
18	75600**	KIT LOWER CASTING	1
19	8913	SHAFT OUTPUT 7/8"	1
20	8931F	BOLT 1/4-20 X 2 SHCS F-T	4
21	8929	BOLT 1/4-20 X 1-1/2 SHCS	2
22	9214A	GEAR 10T CLUSTER PINION HT	1
23	11468	GREASE EP2 MOLY	1

* The top casting kit (P/N: 75300) includes a gasket (P/N: 8919).It also includes a shim (P/N: 3004149) that is not needed for the Dually.

** The lower casting kit (P/N: 75600) includes the powerhead transmission gasket (P/N: 8919), and ball bearings (P/Ns: 8922, 8923).

AUGER PARTS EXPLOSIONS

EA2F, EA3F



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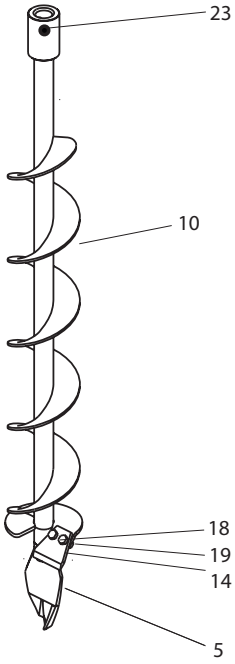

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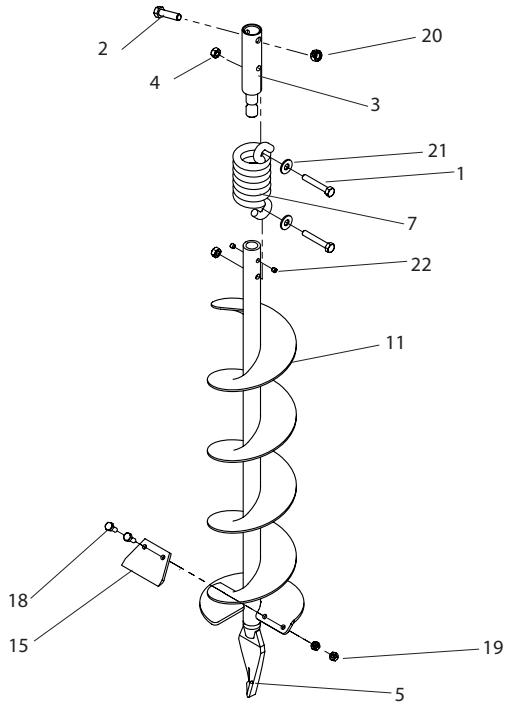

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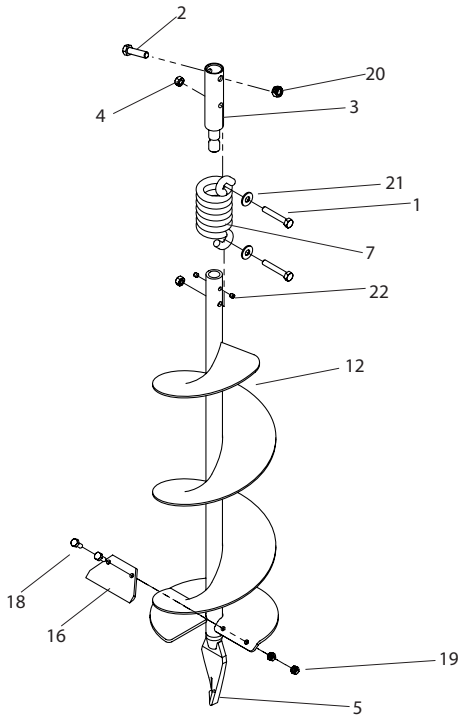

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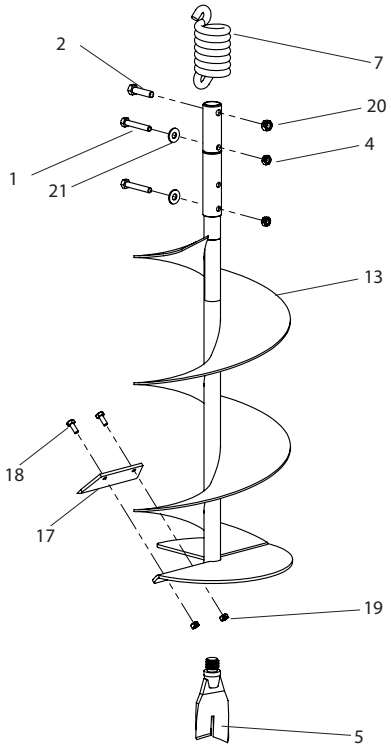

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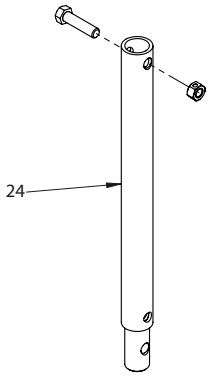

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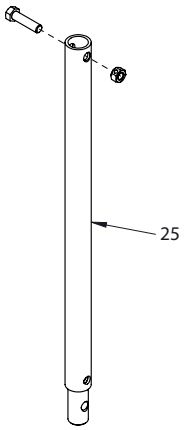
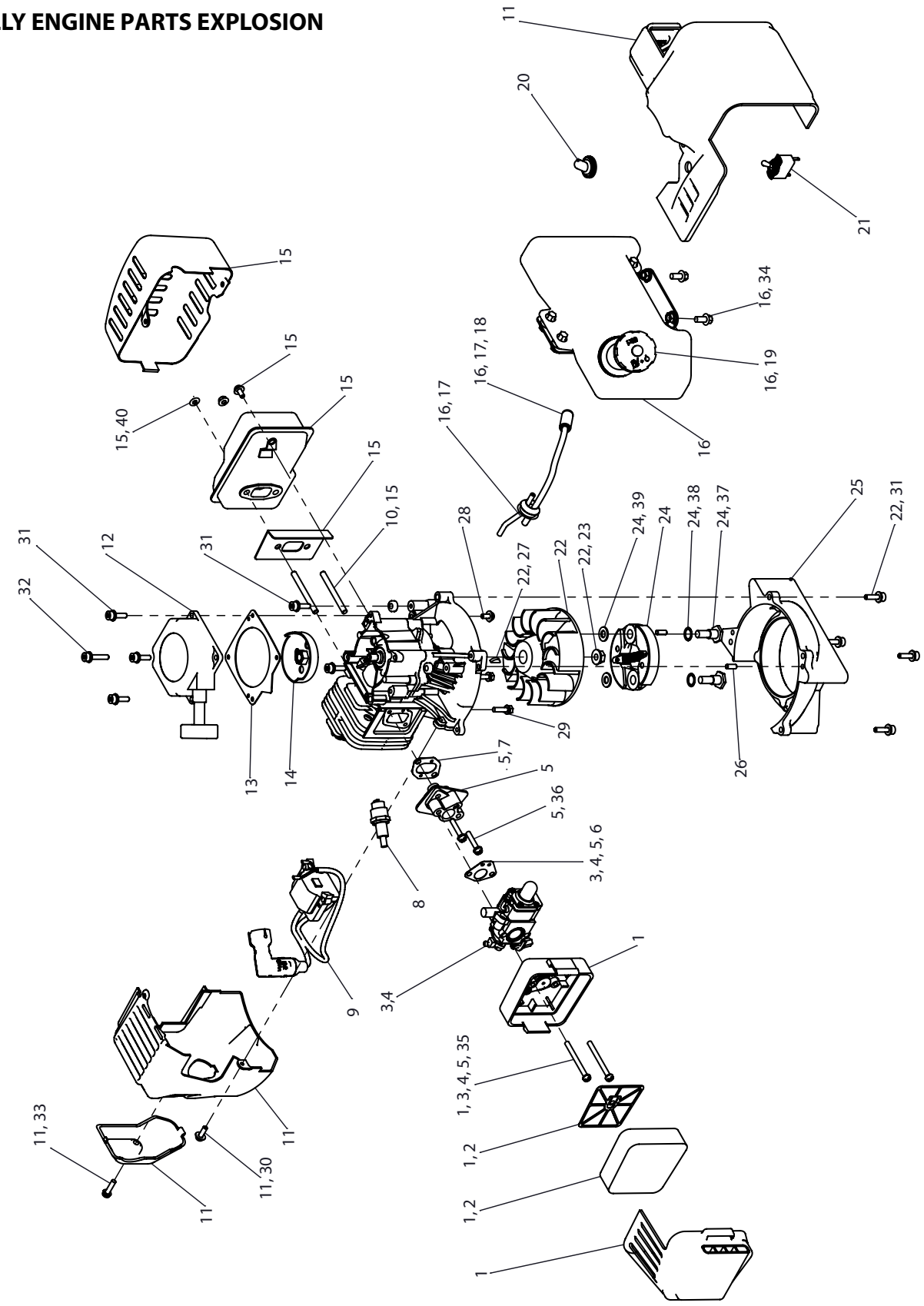


AUGER PARTS LIST

KEY NO.	PART NO.	DESCRIPTION	QTY.
1	1423	BOLT-HHCS, 5/16-18 X 2", GRADE 5 (auger shock spring)	2
2	1433	BOLT-HHCS, 3/8-16 X 1-1/2" (auger to powerhead)	2
3	53684	SHOCK TOP 1-PC (used on 6" and 8" earth augers)	1
4	60G56	NUT-HEX 2-WAY REVERSIBLE LOCK-NUT, 5/16-18	2
5	8958HD	FISHTAIL POINT (used on 4" or larger earth auger)	1
6	8970	EARTH POINT (used on 2" & 3" earth auger)	1
7	8980	SHOCK SPRING (Used on 6" and larger earth augers)	1
8	EA2F	EARTH AUGER, 2" W/FISHTAIL POINT	1
9	EA3F	EARTH AUGER, 3" W/FISHTAIL POINT	1
10	EA4F	EARTH AUGER, 4" W/FISHTAIL POINT	1
11	EA6F	EARTH AUGER, 6" W/FISHTAIL POINT	1
12	EA8F	EARTH AUGER, 8" W/FISHTAIL POINT	1
13	EA10F	EARTH AUGER, 10" W/FISHTAIL POINT	1
14	EB4	EARTH BLADE, 4" (includes EBOLT & ENUT)	1
15	EB6	EARTH BLADE, 6" (includes EBOLT & ENUT)	1
16	EB8	EARTH BLADE, 8" (includes EBOLT & ENUT)	1
17	EB10	EARTH BLADE, 10" (includes EBOLT & ENUT)	1
18	EBOLT	BOLT-HEX, 1/4-28 X 5/8", GRADE 5 (earth blade to auger)	2
19	ENUT	NUT-NYLOC, 1/4-28	2
20	2104	NUT HEX LOCKING, 3/8-16	2
21	WF516	WASHER-FLAT, 5/16"	2
22	715	SET SCREW 1/4-20 X 1/4 SCPC BLK OXIDED	2
23	8955	BOLT 3/8-16 X 1-1/4 SHCS	1
24	EXT12	DEPTH EXTENSION, 12"	1
25	EXT18	DEPTH EXTENSION, 18"	1
ITEMS NOT SHOWN			
--	EB6HD	HEAVY DUTY EARTH BLADE, 6" (includes EBOLT & ENUT)	1
--	EB8HD	HEAVY DUTY EARTH BLADE, 8" (includes EBOLT & ENUT)	1
--	EB-10HD	HEAVY DUTY EARTH BLADE, 10" (includes EBOLT & ENUT)	1

DUALLY ENGINE PARTS EXPLOSION



DUALLY ENGINE PARTS LIST

KEY NO.	PART NO.	DESCRIPTION	QTY.
1	11350	KIT AIR FILTER ASSY SUMMER 2-CYCLE VIPER	1
2	11349	KIT FILTER BLOCK 2-CYCLE VIPER	1
3	11334	KIT CARBURETOR REPLACE	1
4	3004114	KIT CARBURETOR REPAIR 43CC/51CC/71CC	1
5	11205	KIT INTAKE MANIFOLD	1
6	300479	GASKET CARBURETOR 43/51/71 VIPER ENGINE	1
7	300476	GASKET INTAKE VIPER ENG	1
8	BM6A	SPARK PLUG	1
9	300469	IGNITION COIL	1
10	300493	STUD BOLT M6X62MM	2
11	11333	KIT ENGINE AND GAS TANK SHROUDS	1
12	300430	RECOIL ASSEMBLY W/STANDARD HANDLE	1
13	300429	SPACER RECOIL PLATE 2-CYCLE VIPER	1
14	300491	CUP RECOIL CLUTCH 2-CYCLE VIPER	1
15	11197	KIT MUFFLER STRAIGHT EJECTION	1
16	10683	KIT COMPLETE GAS TANK THREE TAB	1
17	3004105	KIT FUEL LINES	1
18	3004103	FUEL FILTER	1
19	300401	GAS CAP VIPER ENGINE SCREW VENT	1
20	10929	COVER TOGGLE SWITCH	1
21	300524	SWITCH TOGGLE BARREL M12	1

KEY NO.	PART NO.	DESCRIPTION	QTY.
22	11209	KIT FLYWHEEL	1
23	300337	NUT M8	1
24	11235	KIT CLUTCH VIPER	1
25	3004110	MOUNT RING AND SHROUD 43/51.7CC HP	1
26	300467	PIN LOCATING VIPER ENG	2
27	300338	KEY	1
28	3250	BOLT M5 X 0.8 X 12 PPHMS GR 8.8 ZN	2
29	300335	BOLT M5 X 20 HH-PCS	2
30	10887	BOLT M5 X 0.8 MM X 16 MM PH W/ WASHER	1
31	10809	BOLT M5 X 20 SHCS GR 8.8 ZN	9
32	11169	BOLT M5 X 28	1
33	300439	BOLT M5 X 20	1
34	300336	BOLT M6 X 1 X 10MM HHF	6
35	300456	BOLT M5 X 50MM W/ WASHER HP ENGINE	2
36	300438	BOLT M5 X 25MM WASHER HD	2
37	300450	BOLT SHOULDER CLUTCH ROTOR	2
38	300449	WASHER M8 SPRING ROTOR	2
39	300462	WASHER M8	2
40	300492	NUT M6 X 1.0 HF GR8.8 YL ZN	2

DUALLY EARTH AUGER POWERHEAD

Warranty Terms and Conditions

PRODUCT WARRANTY: 1-YEAR LIMITED WARRANTY

Ardisam, Inc., a manufacturing company, warrants this **EARTHQUAKE® EARTH AUGER POWERHEAD** to be free from defects in the material or workmanship for a period of one year from the date of purchase. During the one-year warranty of this product, Ardisam will furnish, at their discretion, parts and labor to correct any defect caused by faulty material or workmanship. Any unit used in a commercial application is covered for a period of 90 days after purchase. This warranty applies to the original owner with a proof of purchase and is not transferable. For the warranty to be valid, the product must be registered online, or the warranty card must be filled out and received by Ardisam, Inc., within 30 days of purchase.

ENGINE WARRANTY: 2-YEAR LIMITED EMISSIONS CONTROL WARRANTY
(SEE EXPLANATION OF EMISSIONS CONTROL WARRANTY PROVISIONS FOR DETAILS)

Ardisam, Inc., a manufacturing company warrants its Viper® Engines under a two-year limited warranty to be free from defects in materials and workmanship for the service life of the product not to exceed twenty four consecutive months from the date of purchase for consumer applications.

*These warranties apply only to products which have not been subjected to negligent use, misuse, alteration, accident, unauthorized parts, failure to use proper fuel and oil, or if repairs have been performed at non-authorized service centers. These warranties supersede all other warranties either expressed or implied and all other obligations or liabilities on our part. Ardisam, does not assume, and does not authorize any other person to assume for us, any liability in connection with the sale of our products. **To be at "No Charge," warranty work must be sent directly to Ardisam, Inc. or one of our authorized service centers and performed by them**. To obtain warranty service and/or replacement instructions, contact our customer service department. If you choose to ship your product to Ardisam for warranty repair, you must first have prior approval from Ardisam by calling our customer service department for a return material authorization number (RMA#). Under these circumstances, all items must be shipped prepaid. Ardisam will at no charge, repair or replace, at their discretion, any defective part which falls under the conditions stated above. Ardisam retains the right to change models, specifications and price without notice.

Explanation of Emissions Control Warranty Provisions

Viper® Engines are designed, built and equipped to meet all EPA requirements. It warrants that it is free from defects in material and workmanship that could cause failure to the warranted part; and that it is identical in all material respects to the engine described in the manufacturer's application for certification. When a warrantable condition exists, Ardisam will repair your engine at no cost to you, including parts and labor. The engine emissions label will indicate certification information. Purchasers located more than 100 miles from a Viper® authorized repair center in need of warrantable repair should contact customer service. If it is determined that warranted repair is indeed necessary, Ardisam, Inc., will cover the cost of shipping to an authorized Viper® repair center. All such requests must first be pre-approved by customer service prior to shipping.

Listed below are the parts covered by the emissions control systems warranty. Some parts listed below may require scheduled maintenance and are warranted up to the first scheduled replacement point for that part. See maintenance schedule in Maintenance and Storage section of manual for more details. Coverage under this warranty includes only the parts listed below (the emission and evaporation control systems) if so equipped:

- Air Filter Assembly (only to the first scheduled replacement point)
- Fuel Filter (only to the first scheduled replacement point)
- Carburetor
- Fuel Lines, Fuel Line Fittings and Clamps
- Fuel Metering Valve (if equipped)
- Evaporative System (if equipped)
  - Canister (if equipped)
  - Canister filter (if equipped)
  - Vapor hose (if equipped)
  - Orifice connector (if equipped)
  - Fuel tank
  - Fuel cap
  - Primer bulb canister (if equipped)
- Spark Plugs
- Magneto Ignition System
- Muffler Assembly

LIMITATIONS

The Emission Control Systems Warranty shall not cover any of the following:

a) Repair or replacement required because of misuse or neglect, improper maintenance, repairs improperly performed or replacements not conforming to Ardisam, Inc., specifications that adversely affect performance and/or durability and alterations or modifications not recommended or approved in writing by Ardisam, Inc.

b) Replacement of parts and other services and adjustments necessary for required maintenance at or after the first scheduled replacement point;

c) Consequential damages such as loss of time, inconvenience, loss of use of the engine or equipment, etc.

d) Diagnosis and inspection fees that do not result in eligible warranty service being performed; and

e) Any add-on or modified part, or malfunction of authorized parts due to the use of add-on or modified parts.

These items will be covered for a period of **two years** from the date of the original purchase. Viper warrants that: the components are designed, built and equipped so as to conform with all applicable regulations adopted by the EPA; that they are free from defects in material and workmanship that could cause failure to the engine or other; and that the components used are identical in all material respects to the engine described in the manufacturer's application for certification. The warranty period begins on the date the engine is originally purchased.

MAINTENANCE AND REPAIR REQUIREMENTS

The owner is responsible for the proper use and maintenance of the engine. Ardisam, Inc. recommends that all receipts and records covering the performance of regular maintenance be retained in case questions arise. If the engine is resold during the warranty period, the maintenance records should be transferred to each subsequent owner. Ardisam, Inc. reserves the right to deny warranty coverage if the engine has not been properly maintained; however, Ardisam, Inc. may not deny warranty repairs solely because of failure to keep maintenance records.

Normal maintenance replacement or repair of emission control devices and systems may be performed by any repair establishment or individuals; however, warranty repairs must be performed by an Ardisam authorized service center. Any replacement parts or service that is equivalent in performance and durability may be used in non-warranty maintenance or repairs, and shall not reduce the warranty obligations of the engine manufacturer.

The warranty on emissions-related parts is as follows:

- Any warranted part that is not scheduled for replacement as required maintenance in the owner's manual supplied, is warranted for the warranty period stated above. If any such part fails during the period of warranty coverage, that part will be repaired or replaced at no charge to the owner. Any such part repaired or replaced under the warranty will be warranted for the remaining warranty period.
- Any warranted part that is scheduled only for regular inspection in the owner's manual supplied, is warranted for the warranty period. Any such part repaired or replaced under warranty will be warranted for the remaining warranty period.
- Any warranted part that is scheduled for replacement as required maintenance in the owner's manual supplied, is warranted for the period of time prior to the first scheduled replacement point for that part. If the part fails prior to the first scheduled replacement, the part will be repaired or replaced at no charge to the owner. Any such part repaired or replaced under warranty will be warranted for the remainder of the period prior to the first scheduled replacement point for the part.
- Add on or modified parts that are not exempted by the Air Resources Board may not be used. The use of any nonexempted add on or modified parts by the owner will be grounds for disallowing a warranty claim. The manufacturer will not be liable to warrant failures of warranted parts caused by the use of a nonexempted add on or modified part.

EC DECLARATION OF CONFORMITY

CE

Name and Address of the manufacturer:	Ardisam Manufacturing Inc. 1690 Elm Street, Cumberland, WI U.S.A 54829
Name and Address of person authorised to compile the technical file:	Mr. C. Hindle, Endruro, 3 Appleyard Close, Swinton, Manchester. M27 8AZ United Kingdom
Description of Equipment:	Earth Auger
Model / Type:	Dually
Serial No.:	*00000000000000000000000 - 50000000000000000000000*
Directives / Conformity Assessment Procedures:	Machinery Directive (2006/42/EC) / Annex VIII EMC Directive (2004/108/EC) / Art.10.1
Technical standards and specifications:	
Declaration:	**The person signing below declares that the above named equipment fulfils all the relevant provisions of the stated directives.**
Place of Declaration & Date:	Ardisam Inc., Cumberland, WI. USA October 2011
Signed:	
Printed Name of Authorised Signatory:	Robert Ruppel
Position in Company:	Director of Engineering

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